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# **WATER SUPPLY OUTLOOK FOR WASHINGTON**



**U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE**

Collaborating with

**DEPARTMENT OF ECOLOGY STATE OF WASHINGTON**

AS OF  
**MAY 1, 1974**

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.



## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*Cover Photo: Snow Surveyors near Ship Creek,  
Alaska snow course.*

SCS PHOTO A-272-11

### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia





# **WATER SUPPLY OUTLOOK FOR WASHINGTON**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued by*

KENNETH E. GRANT  
ADMINISTRATOR  
SOIL CONSERVATION SERVICE  
WASHINGTON, D.C.



*Released by*

GALEN S. BRIDGE  
STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE  
SPOKANE, WASHINGTON

*In Cooperation with*

JOHN A. BIGGS  
DIRECTOR  
DEPARTMENT OF ECOLOGY  
STATE OF WASHINGTON



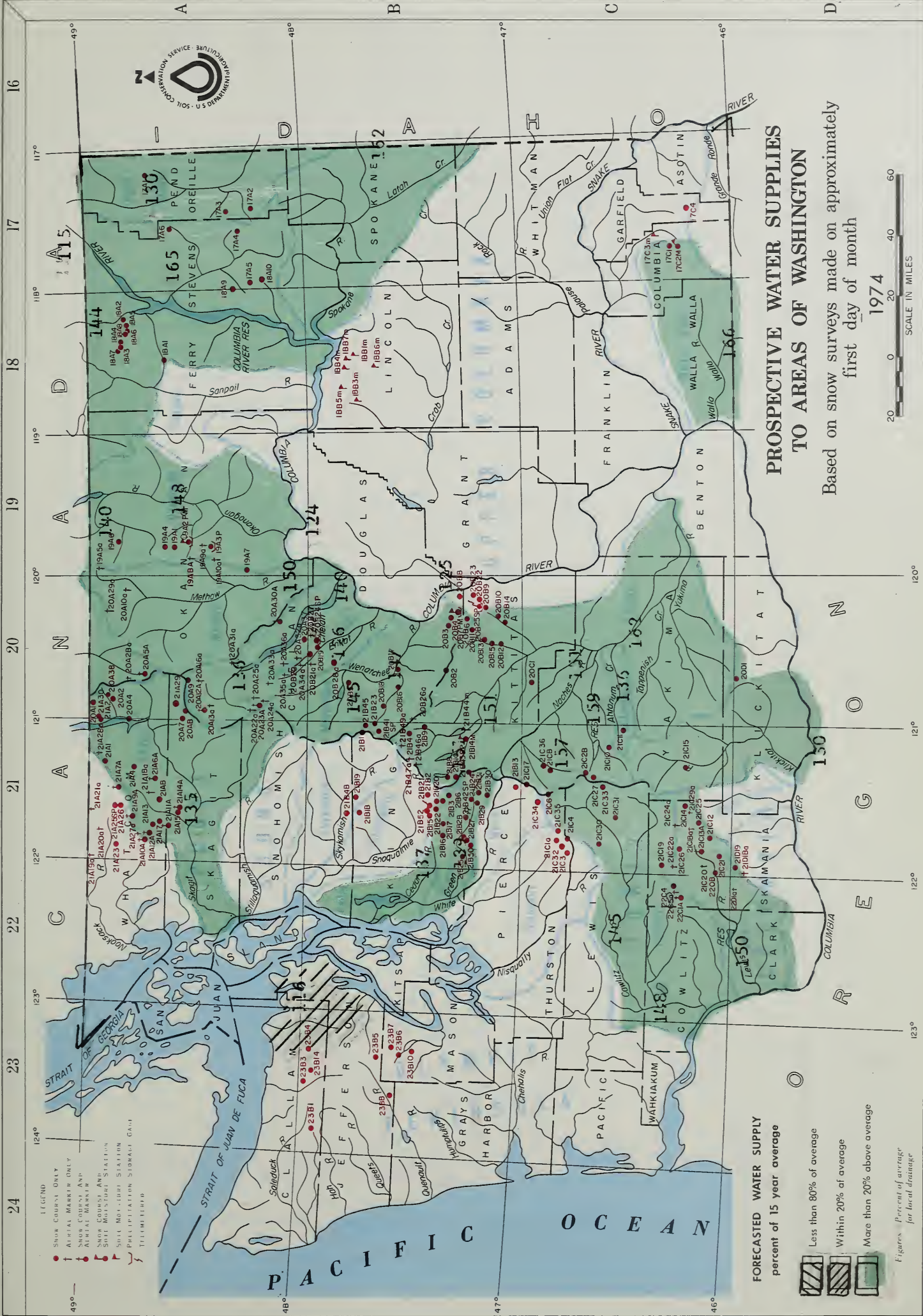
*Report prepared by*

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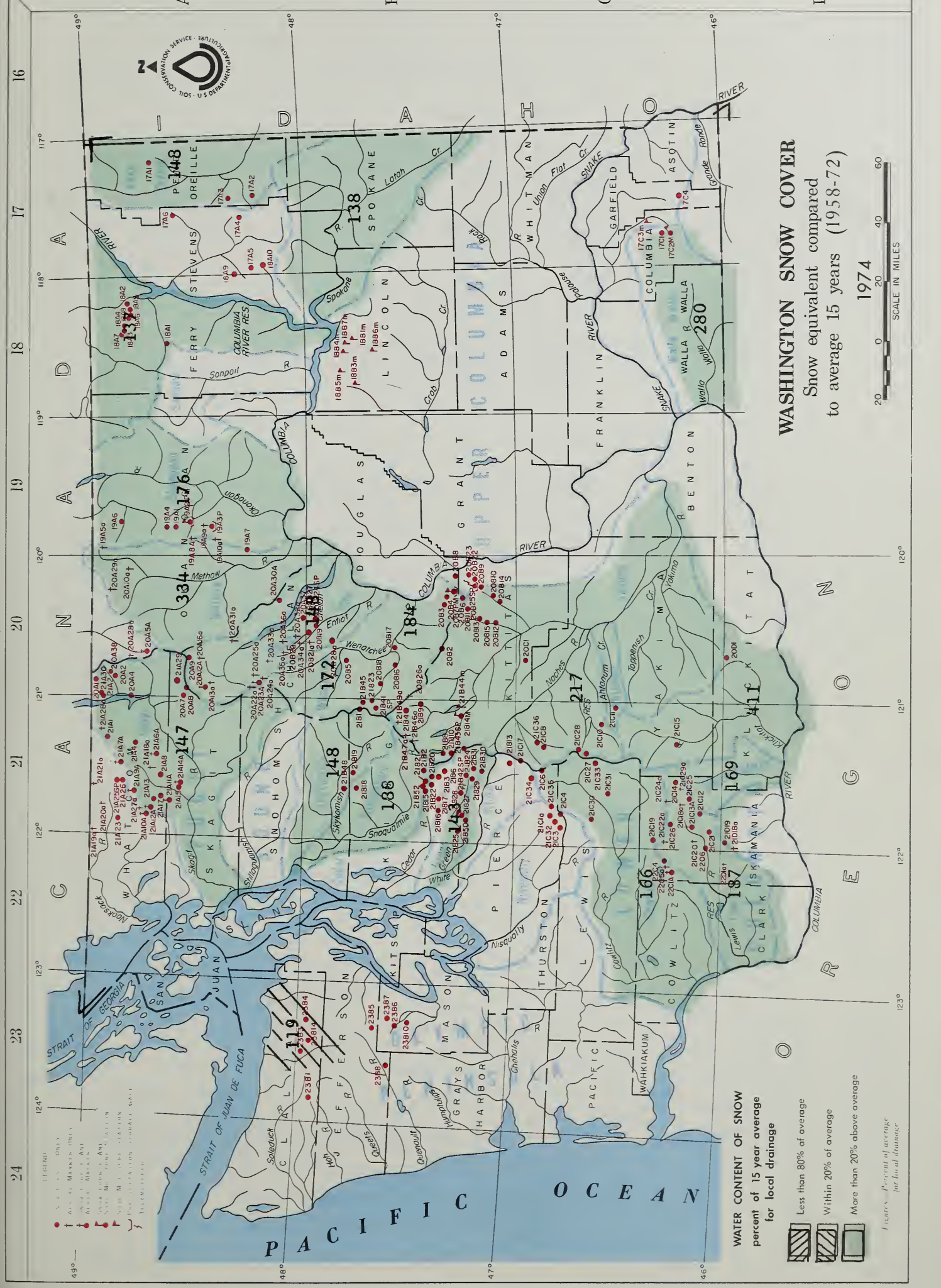




# INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

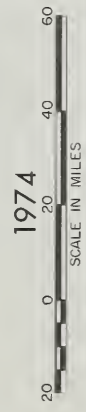
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.													
UPPER COLUMBIA DRAINAGE																														
Pend Oreille River																														
Boyer Mountain	17A2	7	31N	43E	5250	Trough #2	Wenatchee River (continued)	20823SP 10	20N	20E	5310	Colockum Creek	20822	11	20N	20E	5300													
Eunichgrass Meadow	17A1	24	37N	44E	5000																									
Winchester Creek	17A3	30	33N	43E	2970																									
Kettle River																														
Boulder Road	18A2	36	39N	36E	1450	Scout-A-Vista	Stemilt Creek	2083	12	21N	19E	4400	Squilchuck Creek	2083	18	21N	20E	3400												
Butte Creek	18A3	28	39N	35E	4070																									
Cabin Creek	18A4	5	38N	36E	3170																									
Snow Caps Creek	18A5	26	39N	35E	3535	Upper Wheeler	Crob Creek	2086	30	21N	20E	5000	Yakimo River	21C11	26	12N	14E	3100												
Snow Caps Trail	18A6	5	38N	36E	2720																									
Sunmit G. S.	18A7	20	39N	35E	4600																									
Colville River																														
Baird	17A6	19	56N	42E	3215	Ahtanum R. S.	8ig Boulder Creek	21B9	35	23N	14E	3200	Rumping Lake	21C8	23	16N	12E	3450												
Carlson	18A9	34	32N	38E	2885																									
Chewelah	17A4	11	52N	41E	4925																									
Stranger Mountain	17A5	26	31N	38E	4990	Cooke Creek	Doney Flat	21B4	34	12N	14E	2200	Green Lake	21C10	3	12N	13E	6000												
Togo	18A10	6	29N	38E	3370																									
Sonpoll River																														
Sherman Creek Pass	18A1	19	36N	35E	5350	Joe Lake	Lake Cle Elum	21B14M	15	20N	14E	2200	Lemah Creek	21C17	24	17N	16E	5935												
Okanogan River																														
Clark	19A8A	2	36N	23E	7000																									
Mockamuck	19A9A	20	36N	24E	6750	Moose Lake	Mastash	21C17	6	16N	11E	5400	Natum	20B13	4	20N	19E	3875												
Mutton Creek No. 1	19A1	30	37N	24E	5700																									
Mutton Creek No. 2	19A4	19	37N	24E	6000																									
Paysayen	19A2A	32	40N	18E	4300	Grouse Camp	High Creek	20B11	29	21N	19E	5385	Paradise Park (New)	21C35	13	15N	8E	2760												
Rusty Creek	19A3P	18	35N	24E	4000																									
Salmon Meadows	19A2PM	33	37N	24E	4500	Joe Lake	Lake Cle Elum	21B14M	34	20N	12E	4200																		
Starvation Mtn.	19A10A	15	35N	23E	6750																									
Touts Coulee	19A6	30	39N	25E	2845	Moose Lake	Mastash	21C17	24	17N	16E	5935																		
Methow River																														
Billy Goat Pass	20A10A	10	38N	20E	6400	Natum	Trail Creek	20B13	4	20N	19E	3560	Corral Pass	21B34	30	18N	11E	6000												
Dollar Watch	20A29A	8	39N	20E	7000																									
Harts Pass	20A5A	7	37N	18E	6500	Tunnel Avenue	Walters Flat	20B14	13	19N	11E	5560																		
Horseshoe Basin	19A5A	15	40N	23E	7000																									
Loop Loop	19A7	36	34N	23E	4650	Van Hips Pass	Walters Flat	20B15	22	20N	19E	5360																		
Chelton Lake Basin																														
Cloudy Pass	20A22A	12	31N	15E	6500	Kaptus Lake	Walters Pass (East Side)	21B49A	12	23N	13E	3024	White River	21C34	4	16N	9E	6000												
Greenwood Flat	20A23A	8	31N	16E	5275																									
Little Meadows	20A24A	8	31N	16E	5275	Kaptus Pass	Walters Flat	21C28	1	13N	11E	4500																		
Lynan Lake	20A23A	18	31N	16E	5900																									
Park Creek Flat	20A13A	18	34N	16E	2220	White Pass (Leach Lake)	Walters Flat	21C27	1	13N	11E	4500																		
Park Creek Ridge	20A12A	7	34N	16E	4600																									
Petersens	20A16A	3	34N	17E	3730	White River	Walters Flat	21C27	1	13N	11E	4500																		
Rainy Pass	20A9	21	35N	17E	4780																									
Safety Harbor	20A30A	32	31N	20E	6300	White River	Walters Flat	21C34	4	16N	9E	6000																		
War Creek Pass	20A31A	34	33N	18E	6500																									
Entiat River																														
Blue Creek G.S.	20B28A	19	28N	18E	5425	Spruce Springs	Asotin Creek	17C1	9	8N	10E	5700	Cedar River	21B3	10	21N	10E	2390												
Brief	20B19	31	28N	19E	1600																									
Entiat Meadows	20A33A	28	31N	17E	1800																									
Entiat Trail	20A34A	2	29N	17E	3150	Couse	Mill Creek	17C3M	2	9N	10E	3370	City Cabin	21B3	10	21N	10E	2390												
Four Mile Ridge	20A27A	15	28N	19E	7000																									
Fox Camp	20A36A	1	30N	18E	6510	Homestead	Martin Springs (Helmets and)	17C2N	23	9N	10E	4400																		
Pope Ridge	20B20	22	29N	18E	1300																									
Pope Ridge Snow Pillow	20B21SP	22	29N	18E	1300	Klickitat River	Satus Pass	20C1	21	6N	17E	4030	Snoqualmie River	21B4S	31	27N	9E	3500												
Pugh Ridge	20A32A	31	30N	18E	6400																									
Shady Pass	20A37	20	29N	19E	6200	Satus Pass	Satus Pass	21C15	23	2N	12E	3000																		
Snow Brushy	20A35A	21	30N	17E	3850																									
Tomy Creek	20B21A	10	28N	18E	5300	West Fork Cabin	Klickitat River	21C15	23	2N	12E	3000																		
Wenatchee River																														
Berne-Mill Creek	21B23	7	26N	15E	2345	Gutliss Creek	White Salmon River	21C12	35	7N	8E	1000	Snoqualmie River																	
Berne-Mill Creek (New)	21B11SP	13	26N	14E	3710																									
Ricewet Pass No. 2	20B2	35	23	17E	4250																									
Chawankum G. S.	20B16	1	25N	17E	1420																									
Lake Wenatchee	20B17	1	21	17E	1127	Blue Lake	Lewis River	21C24A	19	9N	8E	1800	Slyhomish River																	
Leavenworth R. S.	20B18	1	26N	16E	2110																									
Merritt	21B1	11	26N	13E	4300																									
Stevens Pass and Shred	21B15	12	26	1	1200																									



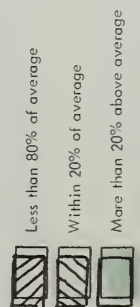


# WASHINGTON SNOW COVER

Snow equivalent compared  
to average 15 years (1958-72)



WATER CONTENT OF SNOW  
percent of 15 year average  
for local drainage



USDA - Percent of average  
for local drainage



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE CAGES

NAME	NUMBER	SEC.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.													
UPPER COLUMBIA DRAINAGE																																			
Pend Oreille River																																			
Boyer Mountain	1742	7	31N	43E	5250	Trough #2	20825SP	10	20N	20E	5310	Wenatchee River (continued)																							
Funckgrass Meadow	1741	24	37N	44E	5000	Coloquium Creek upper	20822	11	20N	20E	5300	Coloquium Creek																							
Winchester Creek	1743	30	33N	43E	2970	Coloquium Creek lower	20823	1	20N	20E	4300	Squilchuck Creek																							
Kettle River																																			
Boulder Road	1842	36	39N	36E	1450	Beehive Springs	2083	12	21N	19E	4400	Stemilt Creek																							
Butte Creek	1843	28	39N	35E	4070	Scout-A-Vista	2084	18	21N	20E	3400	Jump-Off																							
Cabin Creek	1848	5	38N	36E	5170	Upper Kneeler	2087PM	30	21N	20E	4400	Stemilt Slide																							
Goat Creek	1844	26	39N	35E	3535	Crob Creek																													
Snow Caps Creek	1845	3	38N	36E	2150	1881m	32	27N	34E	2440	Creston-Kunz																								
Snow Caps Trail	1846	5	38N	36E	2720	1883m	28	27N	31E	2750	Jack Woods																								
Summit G. S.	1847	20	39N	35E	4600	1884m	21	27N	33E	2420	Krause																								
Colville River																																			
Bald	1746	19	56N	42E	3215	1885m	17	27N	32E	2378	Sheffels																								
Carlson	1849	34	32N	38E	2885	1887m	24	27N	33E	2440	Sheaman																								
Chewelah	1744	11	32N	41E	4925	1886m	24	25N	32E	2290	Meatridge																								
Stranger Mountain	1745	26	31N	38E	4990	Yakima River																													
Togo	18410	6	29N	38E	3370	21C1	26	12N	14E	3100	Ahtanum R. S.																								
Snoqualmie River																																			
Sherman Creek Pass	1841	19	36N	35E	5350	21C8	35	23N	14E	3200	816 Boulder Creek																								
Okonogon River																																			
Clark	1948a	2	36N	23E	7000	21C6	23	16N	12E	3450	Bumping Lake																								
Mockanuck	1949a	20	36N	24E	6750	21C36	13	16N	12E	3400	Colebrook Pass																								
Mutton Creek No. 1	1941	30	37N	24E	5700	20810	25	20N	20E	5370	Cook Creek																								
Mutton Creek No. 2	1944	19	37N	24E	6000	20810	17	19N	20E	4123	Domery Flat																								
Payday Creek	20A28a	32	40N	18E	4500	21844m	15	20N	14E	2200	Fish Lake																								
Rusty Creek	1943P	18	35N	24E	4000	2184	34	21N	14E	3371	Green Lake																								
Salmon Meadows	1942PM	33	37N	24E	4500	20811	3	12N	13E	6000	Grouse Camp																								
Starvation Mtn.	19410A	15	35N	23E	6750	20812	34	20N	19E	5385	High Creek																								
Touts Coulee	1946	30	39N	25E	2845	21846	22	23N	12E	4624	Joe Lake																								
Methow River																																			
Billy Goat Pass	20A10A	10	38N	20E	6400	21844m	15	20N	14E	2200	Lake Cle Elum																								
Dollar Hatch	20A29A	8	39N	20E	7000	21C17	6	16N	11E	5400	Lemah Creek																								
Harris Pass	20A5A	7	37N	18E	6500	20813	4	20N	19E	3875	Manastash																								
Horseshoe Basin	19A5A	15	40N	23E	7000	20813	4	20N	19E	3875	Norse Lake																								
Loup	19A7	36	34N	23E	4650	2188	13	71N	11E	2350	Trail Creek																								
Chelan Lake Basin																																			
Cloudy Pass	20A22a	12	31N	15E	6500	20826a	16	23N	15E	5925	Tunnel Avenue																								
Greenwood Flat	20A25a	3	31N	16E	3540	20826	16	23N	15E	5925	Van Ippes Pass																								
Little Meadows	20A24a	8	31N	16E	5275	20815	22	20N	19E	3360	Walters Flat																								
Lyman Lake	20A23a	18	31N	16E	5900	21849a	12	23N	13E	3024	Waputs Lake																								
Park Creek Flat	20A13a	18	34N	16E	2220	21C27	2	13N	11E	4500	White Pass (East Side)																								
Park Creek Ridge	20A12a	7	34N	16E	4600	21C27	1	13N	11E	4500	White Pass (Leach Side)																								
Petersons	20A16a	3	34N	17E	3730	LOWER COLUMBIA DRAINAGE																													
Rainy Pass	20A9	21	35N	17E	4780	Asotin Creek																													
Safety Harbor	20A30a	32	31N	20E	6300	17C1	9	8N	40E	5700	Spruce Springs																								
War Creek Pass	20A31a	34	33N	18E	6500	Mill Creek																													
Entiat River																																			
Blue Creek G.S.	20A28a	19	28N	18E	5425	Couse																													
Brief	20A19	31	28N	19E	1600	17C1	11	9N	40E	4030	Horsehead																								
Lariat Meadows	20A31a	28	31N	17E	1800	17C1	11	9N	40E	4030	Martin Springs (Helmets SW)																								
Lariat River Trail	20A31a	2	29N	17E	3150	17C1	11	9N	40E	4030	Klickitat River																								
Four Mile Ridge	20A27a	15	28N	19E	7000	20815	2	9N	40E	3370	Satus Pass																								
Fox Camp	20A36a	12	30N	16E	6510	20815	2	9N	40E	3370	West Fork Cabin																								
Pope Ridge	20820	22	29N	18E	4300	20815	2	9N	40E	3370	Satus Pass																								
Pope Ridge Snow Pillow	20821SP	22	29N	18E	4300	20815	2	9N	40E	3370	Satus Pass																								
Pugh Ridge	20A32a	34	30N	18E	6400	20815	2	9N	40E	3370	Satus Pass																								
Shady Pass	20A37	20	29N	19E	6200	20815	2	9N	40E	3370	Satus Pass																								
Snow Brushy	20A35a	21	30N	17E	3850	20815	2	9N	40E	3370	Satus Pass																								
Snow Creek	20A31a	10	28N	18E	5300	20815	2	9N	40E	3370	Satus Pass																								
Wenatchee River																																			
Berne-Mill Creek	21823	7	26N	13E	2255	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Berne-Mill Creek (New)	21811P	3	26N	11E	3210	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Dewett Pass No. 2	2082	35	22E	17E	1270	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Chiwaukum G. S.	20816	33	27N	17E	1810	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Lake Wenatchee	2085	33	27N	17E	1170	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Leavenworth R. S.	20817	1	26N	17E	1127	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Merritt	20818	1	26N	16E	2140	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Stevens Pass	2181	11	26N	13E	4170	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Stevens Pass Sand Shred	21815	12	26N	14E	4170	Cultus Creek	21C12	35	7N	8E	4000	White Salmon River																							
Lewis River (continued)																																			
David Meadow	21C29a	21	9N	10E	5600	Grand Meadow	21C25	28	8N	9E	3500	Lewis River (continued)																							
Grand Meadow	21C25	28	8N	9E	3500	Lone Pine Shelter	21C26	8	9N	7E	3800	Lewis River (continued)																							
Lone Pine Shelter	21C26	8	9N	7E	3800	Marble Mountain	21C26	24	8N	5E	3200	Lewis River (continued)																							
Marble Mountain	21C26	24	8N	5E	3200	New Muddy River	22C6	36	8N	6E	2000	Lewis River (continued)																							
New Muddy River	22C6	36	8N	6E	2000	Oldman Pass	21D19	22	6N	7E	3100	Lewis River (continued)																							
Oldman Pass	21D19	22	6N	7E	3100	Plains of Abraham	22C1a	35	9N	5E	2100	Lewis River (continued)																							
Plains of Abraham	22C1a	35	9N	5E	2100	Smith Creek Road	22C2	29	9N	6E	4400	Lewis River (continued)																							
Smith Creek Road	22C2	29	9N	6E	4400	Spencer Meadow	21C10a	16	8N	7E	3400	Lewis River (continued)																							
Spencer Meadow	21C10a	16	8N	7E	3400	Surprise Lakes	21C10a	14	7N	8E	4250	Lewis River (continued)																							
Surprise Lakes	21C10a	14	7N	8E	4250	Table Mountain	21C24a	20	9N	9E	4200	Lewis River (continued)																							
Table Mountain	21C24a	20	9N	9E	4200	Timbered Peak	21D18a	36	6N	6E	3000	Lewis River (continued)																							
Timbered Peak	21D18a	36	6N	6E	3000	Cowitz River																													
Cowitz River																																			
Cayuse Pass	21C6	15	16N	10E	5300	Mosquito Meadows	21C19	33	10N	7E	4100	Cowitz River																							
Mosquito Meadows	21C19	33	10N	7E	4100	Ohanapecosh	21C32	28	13N	10E	2200	Cowitz River																							
Ohanapecosh	21C32	28	13N	10E	2200	Packwood Lake	21C31	21	13N	10E	2870	Cowitz River																							
Packwood Lake	21C31	21	13N	10E	2870	Pigtail Peak	21C54	11	13N	11E	5900	Cowitz River																							
Pigtail Peak	21C54	11	13N	11E	5900	Potato Hill	21C14	36	10N	10E	4500	Cowitz River																							
Potato Hill	21C14	36	10N	10E	4500	Williams Creek	21C30	3	13N	8E	3250	Cowitz River																							
Williams Creek	21C30	3	13N	8E	3250	Nisqually River																													
Nisqually River																																			
Ghost Forest	21C3	23	15N	8E	4550	Longgate	21C35	13	15N	8E	2760	Nisqually River																							
Longgate	21C35	13	15N	8E	2760	Paradise Park (New)	21C1	13	15N	8E	5050	Nisqually River																							
Paradise Park (New)	21C1	13	15N	8E	5050	Stem Glade	21C1	13	15N	8E	5050	Nisqually River																							
Stem Glade	21C1	13	15N	8E	5050	White River																													
White River																																			
Corral Pass	21813	30	18N	11E	6000	White River Campground	21C34	4	16N	9E	6000	White River																							
White River Campground	21C34	4	16N	9E	6000	Green River																													
Green River																																			
Airstrip	21824	18	20N	11E	1800	Charley Creek	21825	27	21N	8E	1200	Green River																							
Charley Creek	21825	27	21N	8E	1200	Congier Mountain	21827	14	20N	8E	2900	Green River																							
Congier Mountain	21827	14	20N	8E	2900	Grass Mountain No. 2	21828	12	20N	8E	2100	Green River																							
Grass Mountain No. 2	21828	12	20N	8E	2100	Lester Creek	21829	36	20N	8E	3100	Green River																							
Lester Creek	21829	36	20N	8E	3100	Lynn Lake	21831	5	19N	11E	4700	Green River																							
Lynn Lake	21831	5	19N	11E	4700	Sawmill Ridge	21830	14	20N	11E	5000	Green River																							
Sawmill Ridge	21830	14	20N	11E	5000	Snowshoe Butte	21830	25	21N	11E	3860	Green River																							
Snowshoe Butte	21830	25	21N	11E	3860	Stumpnose Pass	21830	18	19N	11E	4100	Green River																							
Stumpnose Pass	21830	18	19N	11E	4100	Twin Camp	21830	18	19N	11E	4100	Green River																							
Twin Camp	21830	18	19N	11E	4100	Cedar River																													
Cedar River																																			
City Cabin	2183	10	21N	10E	2390	Mt. Gardner	21831	30	22N	10E	3300	Cedar River																							
Mt. Gardner	21831	30	22N	10E	3300	Mt. Gardner Aux.	21832	31	22N	10E	2500	Cedar River																							
Mt. Gardner Aux.	21832	31	22N	10E	2500	Mt. Lindsey	21816	31	22N	9E	2500	Cedar River																							
Mt. Lindsey	21816	31	22N	9E	2500	Mt. Washington New	21815	8	22N	9E	3000	Cedar River																							
Mt. Washington New	21815	8	22N	9E	3000	Rex River	21852	8	22N	9E	3000	Cedar River																							
Rex River	21852	8	22N	9E	3000	South Fork Cedar	21817	11	21N	9E	2400	Cedar River																							
South Fork Cedar	21817	11	21N	9E	2400	Trunkum Creek	21820	24	21N	10E	3400	Cedar River																							
Trunkum Creek	21820	24	21N	10E	3400	Snoqualmie River																													
Snoqualmie River																																			
Alpine Meadows	21848	31	27N	9E	3500	Olathe Meadows	2182	19	22N	11E	3625	Snoqualmie River																							
Olathe Meadows	2182	19	22N	11E	3625	South Fork 1011	21818	26	26N	9E	1900	Snoqualmie River																							
South Fork 1011	21818	26	26N	9E	1900	Skokomish River																													
Skokomish River																																			
Black and White	2387	17	24N	5W	4200	Four Stream	23810	1	23N	6W	4700	Skokomish River																							
Four Stream	23810	1	23N	6W	4700	Home Sweet Home	2385	28	25N	5W	5200	Skokomish River																							
Home Sweet Home	2385	28	25N	5W	5200	Sundown Pass	2388	25	24N	7W	3900	Skokomish River																							
Sundown Pass	2388	25	24N	7W	3900	Soladuck River																													
Soladuck River																																			
Deer Lake	2381	14	28N	9W	3900	Soladuck River																													
Soladuck River																																			
OLYMPIC PENINSULA																																			



## WATER SUPPLY OUTLOOK

State of Washington

May 1, 1974

\*\*\*  
\*\*\*  
\*\* As we reported last month, the serious situation with regards to \*\*  
\*\* the high water has not improved during the month of April. The \*\*  
\*\* lower elevation snow is pretty well gone, as can be expected. \*\*  
\*\* The middle elevation snow did not deplete as rapidly as normal \*\*  
\*\* and the high elevation snow actually gained in water equivalent. \*\*  
\*\* The results of this situation leads us to believe that there will \*\*  
\*\* be a good water supply extending throughout the summer period, \*\*  
\*\* but that the danger of very high river stages and much flooding \*\*  
\*\* of low land is not anticipated at this time. Of course, subse- \*\*  
\*\* quent weather situation could change this. If we continue to get \*\*  
\*\* the warm days and cool nights, the water will run off in a fairly \*\*  
\*\* orderly manner, but if the precipitation continues, as it has this \*\*  
\*\* past month, to be above normal and the weather turns warm both \*\*  
\*\* during the day and night, then the flood situation could become \*\*  
\*\* quite serious. At the present time, it doesn't appear that the \*\*  
\*\* damaging flows which were experienced in 1972 will be repeated, \*\*  
\*\* but this could change with the weather. The snow packs in the \*\*  
\*\* watersheds generally increased, percentagewise, in spite of the \*\*  
\*\* above normal runoff which occurred during April. Reservoirs have \*\*  
\*\* a good supply of water in storage but managers are attempting \*\*  
\*\* to lower these reservoirs in order to control the high water. \*\*  
\*\*\*  
\*\*\*

### SNOW COVER

The snow packs in the state and tributary basins all indicate well above normal snow cover on the ground as of May 1. The range is from 19% above normal on the Olympic Peninsula to 234% above normal in the Methow. The one snow course in the Klickitat Basin has a snow pack that is 311% greater than average. When comparing these snow packs to that which occurred during the dry year of 1973, the numbers are somewhat ludicrous, for example, in the Lewis River the snow pack is 676% greater than last year and in the Wenatchee 665% greater. The snow pack usually reaches its maximum on or about April 1 except at the very high snow courses in the Cascade Mountains, but this year just about all snow courses in the high middle range and low high range increased water equivalent from that measured on the first of April. This was due, in part, to the above normal precipitation and the cool days, resulting in little melt of the snow pack. The lower elevation snows, of course, are gone and this will help in the overall seriousness of the potential flood danger. There is more area at lower elevations than at higher elevations and this low elevation snow tends to be more flashy than that which is in the upper reaches.







## RESERVOIRS

The high runoff of the last two months has made it difficult for reservoir managers to lower the lake levels on multi-purpose reservoirs, therefore many of these reservoirs have more water in storage as of May 1 than normal for this time of year. The exceptions are Franklin D. Roosevelt Lake and Chelan Lake. The five reservoirs in the Yakima Drainage have less water than normal, about 15% less, and small reservoirs, with little or no use for flood control purposes, are slightly above normal for this time of year. Franklin D. Roosevelt Lake is below its usable capacity level. This has been brought down for the removal of the coffer dam in front of the third power house. The dam is now removed and the fore bay and lake are starting to fill. With normal conditions, Franklin D. Roosevelt Lake should be full approximately July 1.

## PRECIPITATION

Only the northeastern section of Washington and the northwest slopes of the Cascades had subnormal rainfall during the month of April, this reported by the National Weather Service. These two areas are 9% and 4% below normal, respectively. The Columbia River in Canada had rainfall 27% above normal and the Pend Oreille-Spokane Drainage precipitation was 16% greater. Southwest Washington had the most rain of all areas - 53% greater than average. In the central area, rainfall was approximately 25% above average. This same percentage rainfall also occurred on the southwest slopes of the Cascade Range.

## STREAMFLOW

During the month of April, all rivers flowed well above normal with the Walla Walla River, as measured near Touchet, setting a new high for the month of April. The range of runoff was from 7% above normal for the Skagit River as measured at Concrete to this high of 119% greater on the Walla Walla. Most low elevation streams had a higher runoff than those originating at the higher elevations. This was due, in part, to the above normal rainfall and the current saturated situation of the soil mantle. Any precipitation occurring has to run off because the soil mantle is full. Forecasts of streamflow have been increased slightly, percentagewise, from that which was reported last month; this, in spite of high runoff. The range is now from 15% above normal at Birchbank to a high of 62% above for the Yakima River near Parker and 65% above on the Colville River at Kettle Falls. The Mill Creek, draining into the Walla Walla River near Walla Walla, is expected to flow 66% above normal. Numerical forecasts can be found following this narrative statement.







# STREAMFLOW FORECASTS - MAY 1974

The following summarized runoff forecasts are based principally on mountain snow-cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. Streamflow figures for 1973 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1974	Seasonal Streamflow in Thousands of Acre-Feet					
		% 15-Yr. Avg.	Fore- cast period	1973	1972	1971	15-Yr. Average 58-72
<u>COLUMBIA BASIN</u>							
<u>Columbia River System</u>							
Columbia River	49800	115	May-Sept	32819	53649	45815	43514
at Birchbank <u>1/</u>	39500	114	May-July	25884	43659	36572	34632
	29400	119	May-June	18223	31436	26832	24633
Columbia River	77300	124	May-Sept	41905	77387	70587	61962
at Grand Coulee <u>1/</u>	64100	125	May-July	34211	65326	59185	51473
	50000	128	May-June	25885	49770	45787	39153
Columbia River	84800	125	May-Sept	45114	89947	77135	67934
bl Rock Island Dam <u>1/</u>	70600	124	May-July	37164	76536	65272	56790
	54400	126	May-June	27954	58145	50620	43202
Columbia River	116000	130	May-Sept	57890	119696	111599	91599
at The Dalles, Or <u>1/</u>	98000	128	May-July	47028	102877	95796	76822
	78600	131	May-June	36089	81356	76452	60087
<u>PEND OREILLE RIVER SYSTEM</u>							
Pend Oreille River	17800	130	May-Sept	6929	17909	16692	13737
bl. Box Canyon	16200	130	May-July	6338	16336	15402	12471
	13400	127	May-June	5507	13725	12997	10561
<u>KETTLE RIVER SYSTEM</u>							
Kettle River	2330	144	May-Sept	983	2068	2020	1614
nr. Laurier	2250	147	May-July	956	1984	1956	1534
	2020	146	May-June	887	1743	1707	1381

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.







Basin, Stream and Station	Forecast Runoff 1974	Seasonal Streamflow in Thousands of Acre-Feet					
		% 15-Yr. Avg.	Fore- cast period	1973	1972	1971	15-Yr. Average 58-72
<u>Kettle River System (Cont.)</u>							
Colville River	150	165	May-Sept	32	75	108	91
at Kettle Falls	135	169	May-July	29	65	96	80
	115	162	May-June	27	56	84	71
<u>Spokane River System *</u>							
Spokane River	3250	162	May-Sept	760	3100	2984	2010
at Post Falls ID <u>2/</u>	3140	163	May-July	713	2973	2840	1926
	2900	161	May-June	650	2742	2566	1800
<u>Okanogan River System</u>							
Similkameen River	2000	140	May-Sept	673	3118	1865	1425
nr. Nighthawk	1860	140	May-July	629	2949	1774	1333
	1600	141	May-June	554	2426	1511	1131
Okanogan River	2350	148	May-Sept	704	3603	2096	1587
nr. Tonasket	2100	145	May-July	646	3273	1948	1446
	1750	144	May-June	561	2646	1643	1213
<u>Methow River System</u>							
Methow River	1420	150	May-Sept	466	1818	1263	946
nr. Pateros	1280	146	May-July	430	1678	1183	879
	1120	150	May-June	370	1383	985	748
<u>Chelan River System</u>							
Chelan River	1600	140	May-Sept	702	1730	1456	1140
at Chelan <u>3/</u>	1420	142	May-July	605	1483	1258	999
	1080	141	May-June	469	1114	924	767
Stehekin River	1130	136	May-Sept	490	1167	1044	830
at Stehekin	960	136	May-July	396	975	878	702
	740	141	May-June	301	704	608	526
Entiat	280	126	May-Sept	-	372	298	223
nr. Ardenvoir	260	127	May-July	-	335	268	204
	210	127	May-June	-	257	197	165

\* Forecasts made by Jack A. Wilson, Soil Conservation Service, Boise, Idaho.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversion by Rathdrum Prairie Canal.

3/ Observed flow corrected for storage in Lake Chelan.







Basin, Stream and Station	Forecast Runoff 1974	Seasonal Streamflow in Thousands of Acre-Feet					
		% 15-Yr. Avg.	Fore- cast period	1973	1972	1971	15-Yr. Average 58-72
<u>Wenatchee River System</u>							
Wenatchee River at Plain	1690	145	May-Sept	689	1764	1544	1165
	1510	145	May-July	608	1523	1355	1040
	1200	148	May-June	488	1109	952	809
Wenatchee River at Peshastin	2330	147	May-Sept	903	2538	2104	1583
	2070	145	May-July	808	2216	1862	1426
	1620	145	May-June	656	1634	1318	1121
Stemilt Basin nr. Wenatchee	150*	109	May-Sept	-	145*	148*	138*
<u>Yakima River System</u>							
Yakima River nr. Martin <u>4/</u>	175	151	May-Sept	64	196	176	116
	160	154	May-July	58	174	163	104
	134	151	May-June	51	143	124	89
Yakima River at Cle Elum <u>5/</u>	1200	151	May-Sept	441	1328	1194	794
	1070	152	May-July	376	1188	1073	706
	910	153	May-June	319	969	828	593
Yakima River nr. Parker <u>6/</u>	2160	162	May-Sept	415	2732	2543	1328
	2150	165	May-July	423	2572	2290	1298
	1850	157	May-June	432	2195	1823	1178
Kachess River nr. Easton <u>7/</u>	158	158	May-Sept	52	174	147	100
	151	162	May-July	48	161	148	93
	128	158	May-June	44	132	115	81
Cle Elum River nr. Roslyn <u>8/</u>	610	148	May-Sept	233	679	579	410
	560	151	May-July	206	603	520	371
	460	150	May-June	172	469	385	306

\* Thousands of Miners' Inches.

4/ Observed flow corrected for storage in Lake Keechelus.

5/ Observed flow corrected for storage in Keechelus, Kachess and Cle Elum Lakes and diversion by Kittitas Canal.

6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation and Sunnyside Canals.

7/ Observed flow corrected for storage in Lake Kachess.

8/ Observed flow corrected for storage in Lake Cle Elum.







Basin, Stream and Station	Forecast Runoff 1974	Seasonal Streamflow in Thousands of Acre-Feet					
		% 15-Yr. Avg.	Fore- cast period	1973	1972	1971	15-Yr. Average 58-72
<u>Yakima River System (Cont.)</u>							
Bumping River	203	157	May-Sept	63	211	183	129
nr. Nile <u>9/</u>	186	158	May-July	57	186	164	118
	151	157	May-June	51	138	114	96
American River	175	156	May-Sept	59	168	162	112
nr. Nile	162	157	May-July	54	151	145	103
	125	147	May-June	47	119	104	85
Tieton River	340	159	May-Sept	140	369	297	214
at Tieton Dam <u>10/</u>	280	157	May-July	107	304	243	178
	210	151	May-June	81	229	169	139
Naches River	1130	151	May-Sept	366	1313	1038	748
nr. Naches <u>11/</u>	1030	153	May-July	309	1175	937	669
	850	152	May-June	260	942	722	557
Ahtanum Creek	53	136	May-Sept	16	65	55	39
nr. Tampico <u>12/</u>	48	137	May-July	14	59	49	35
	42	140	May-June	12	49	40	30
<u>Lower Columbia River System</u>							
Mill Creek	30	166	May-Sept	13	24	21	18
nr. Walla Walla	25	178	May-July	9	19	17	14
	22	183	May-June	6	15	15	12
Lewis River	1400	150	May-Sept	570	1199	1443	933
at Ariel <u>13/</u>	1220	159	May-July	440	993	1222	765
	1000	155	May-June	354	837	958	643
Cowlitz River	2390	145	May-Sept	-	2526	2383	1650
Blw. Mayfield Dam	2090	150	May-July	-	2149	2045	1391
	1660	148	May-June	-	1679	1517	1123

9/ Observed flow corrected for storage in Bumping Lake.

10/ Observed flow corrected for storage in Rimrock Lake.

11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals and City of Yakima.

12/ Observed flow of North and South Forks (combined)

13/ Observed flow corrected for storage in Lake Merwin, Yale and Swift Reservoirs.







Basin, Stream and Station	Forecast Runoff 1974	Seasonal Streamflow in Thousands of Acre-Feet					
		%	Fore-	15-Yr.			
		15-Yr. Avg.	cast period	1973	1972	1971	15-Yr. Average 58-72

Lower Columbia River System (Cont.)

<u>Cowlitz River</u>							
at Castle Rock <u>14/</u>	3110	148	May-Sept	1224	3036	3043	2093
	2700	155	May-July	1007	2548	2587	1741
	2140	152	May-June	831	1999	1918	1407

OLYMPIC PENINSULA

Dungeness River System

Dungeness River	170	116	May-Sept	-	183	178	147
nr. Sequim	137	115	May-July	-	146	136	119
	105	124	May-June	-	102	88	85

PUGET SOUND

Skagit River System

Skagit River	2750	135	May-Aug	-	3162	2574	2037
at Newhalem <u>15/</u>							

Cedar River System

Cedar River	125	137	Apr-Sept	-	122	120	91
at Cedar Falls							

Green River System

Green River	305	139	May-Sept	120	342	313	220
Blw. Howard Hansen Dam							

14/ Observed flow corrected for storage in Mayfield Reservoir.

15/ Observed flow corrected for storage in Diablo, Ross, and Gorge Reservoirs.







# COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about May 1, 1974 as percent of the same date in 1973 and 1972 and average of record

Tributary Basin	No. of Courses Average	1974 Snow Water Expressed as percent of		
		1973	1972	1958-72 Avg.

## UPPER COLUMBIA BASIN

Pend Oreille	15	248	105	148
Kettle	11	192	103	137
Spokane	9	378	85	138
Okanogan	32	235	92	176
Methow	5	303	123	334
Chelan	2	226	90	148
Entiat	8	305	105	172
Wenatchee	8	765	77	184
Yakima	13	484	98	217

## LOWER COLUMBIA

Mill Creek	1	755	155	280
Klickitat	1	-	-	411
White Salmon	2	432	109	169
Lewis	16	776	113	187
Cowlitz	4	370	101	166

## PUGET SOUND

Nisqually	4	296	85	-
White	1	256	99	-
Green	3	258	113	143
Snoqualmie	1	503	112	188
Skykomish	2	376	98	148
Skagit	14	361	85	147
Nooksack	1	254	132	-

## OLYMPIC PENINSULA

Skokomish	3	202	112	-
Elwha	1	232	93	119



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97	98	99	100



RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE <u>1</u> / CAPACITY	Measured (May)			
			1974	1973	1972	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	419.1	116.1	208.7	253.2
Columbia	Franklin D. Roosevelt Lake	5232.0	-1948.0	-42.5	497.3	1654.6
Columbia	Banks Lake	761.8	548.2	319.0	213.2	457.7
Okanogan	Conconully Reservoir	13.0	10.1	11.2	10.6	11.2
Okanogan	Salmon Lake	10.5	9.9	9.9	9.5	7.8
Chelan	Lake Chelan	676.1	188.5	195.2	205.1	225.1
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	116.5	127.0	106.1	121.2
Kachess	Kachess Lake	239.0	149.8	188.4	161.2	199.2
Cle Elum	Lake Cle Elum	436.9	249.7	319.0	171.6	310.9
Bumping	Bumping Lake	33.7	8.4	16.8	6.4	16.1
Tieton	Rimrock Lake	198.0	144.3	131.5	64.5	146.9
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1202.0	700.2	722.2	768.7	368.5
Skagit	Diablo Reservoir	90.6	85.7	88.4	88.4	85.7
Skagit	Gorge Reservoir	9.8	7.9	8.4	8.4	-

<sup>1/</sup> Based on Active Storage

\* 15-year average 1958-72







## SOIL MOISTURE - MAY

Drainage Basin and Station	Number	Elev.	Profile Depth	Inches Total Capacity	Soil Moisture Content Inches as of May 1		
					1974	1973	1972

OKANOGAN

Salmon Meadows	19A2M	4500	48	5.4	3.8	3.7	3.8
Trout Creek	3-M	3600	48	7.3	Late	3.6	5.6

YAKIMA

Domery Flat	21B20m	2200	48	6.9	4.8	4.8	4.8
Lake Cle Elum	21B14M	2200	48	12.8	9.1	9.1	9.1

WALLA WALLA

Couse	17C3m	3650	48	11.1	N/M	7.4	10.5
Helmrs	17C2M	4400	48	12.0	N/M	9.9	10.7

WENATCHEE

Upper Wheeler	20B7M	4400	48	12.7	13.0	9.2	12.2
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## FALL SOIL MOISTURE

Drainage Basin and Station	Number	Elev.	Profile Depth	Inches Total Capacity	Soil Moisture Content Inches as of Oct. 1		
					1973	1972	1971

OKANOGAN

Salmon Meadows	19A02M	4500	48	5.4	2.6	2.8	2.7
Trout Creek	3-M	3600	48	7.3	2.8	3.3	3.3

YAKIMA

Domery Flat	21B20m	2200	48	6.9	2.6	4.1	2.1
Lake Cle Elum	21B14M	2200	48	12.8	6.1	8.7	7.1

WALLA WALLA

Couse	17C3m	3650	48	11.1	5.6	6.0	6.2
Helmrs	17C2M	4400	48	12.0	7.6	7.7	8.2

WENATCHEE

Upper Wheeler	20B7M	4400	48	12.7	6.0	5.7	6.5
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1. *...*  
 2. *...*  
 3. *...*

1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

1. *...*  
 2. *...*  
 3. *...*

1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
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1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

1. *...*  
 2. *...*  
 3. *...*



# PRECIPITATION 1/

## Division Averages and Departures

Drainage Divisions	FALL		SPRING	
	Sept-Oct Observed	1973 <u>2/</u> Departure	Nov.-1973--Mar.-1974 Observed Departure	April-1974 Observed Departure
Columbia in Canada	5.14	+ 0.67	15.91 + 3.16	1.85 + 0.39
Pend Oreille - Spokane	4.28	- 0.20	32.17 +13.42	2.67 + 0.37
Northeastern Washington	3.36	- 0.58	17.93 + 6.82	1.31 - 0.14
Southeastern Washington	3.71	+ 0.48	20.99 + 7.52	3.10 + 1.07
Central Washington	4.68	- 0.07	36.60 + 9.07	2.76 + 0.57
North Central Washington	3.44	+ 1.82	9.48 + 2.76	1.11 + 0.22
Northwest Slope Cascades	11.53	- 1.16	71.63 +19.40	6.13 - 0.24
Southwest Slope Cascades	9.69	+ 1.01	57.29 +15.65	5.74 + 1.12
Northeastern Washington		- Lower Spokane, Colville, Sanpoil and Lower Kettle Drainages.		
Southeastern Washington		- Touchet, Tucannon and Palouse Drainages.		
Central Washington		- Yakima, Wenatchee and Chelan Drainages.		
North Central Washington		- Methow and Okanogan Drainages.		
Northwest Slope Cascades		- Puget Sound Drainages.		
Southwest Slope Cascades		- Lower Columbia Drainages.		

1/ - Preliminary analysis by National Weather Service from data furnished by Meteorological Services of Canada and the National Weather Service

2/ - Departure from 15-year (1958-72) drainage division average.



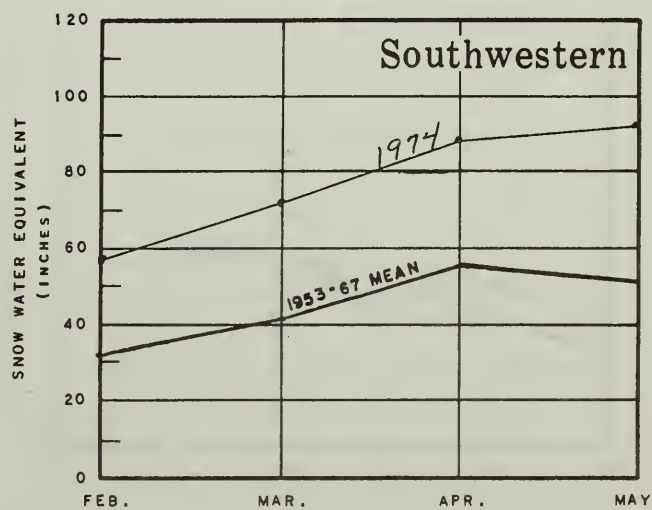
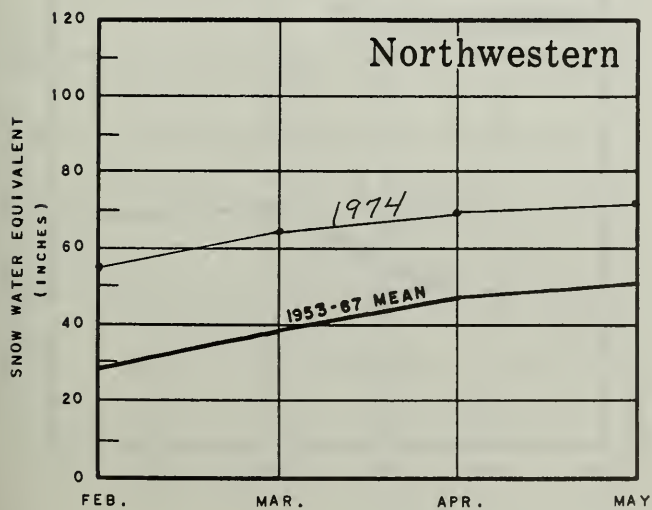
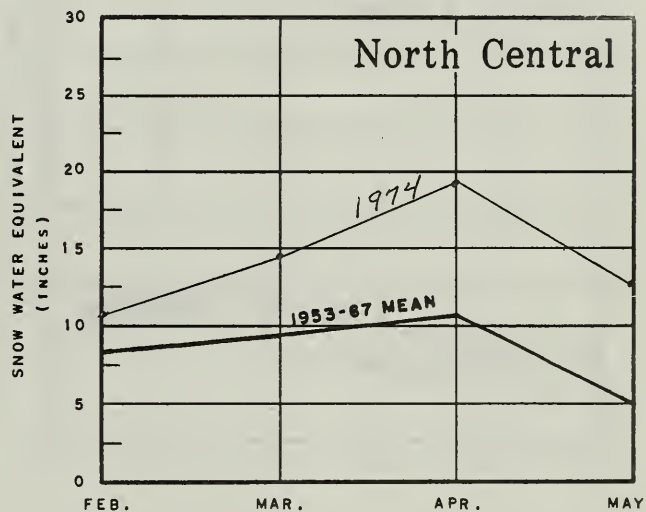
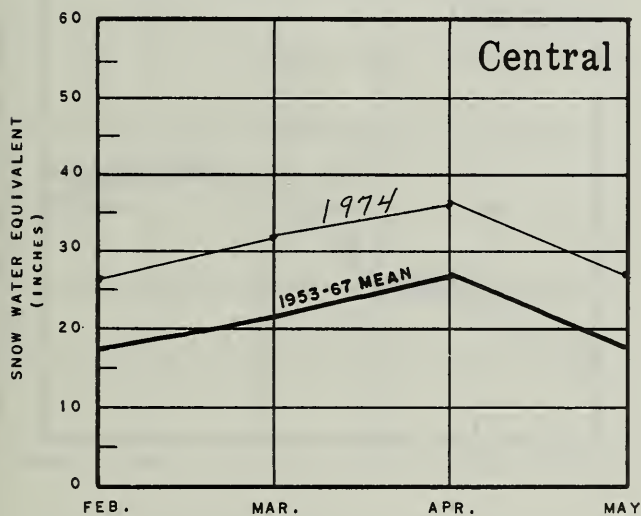
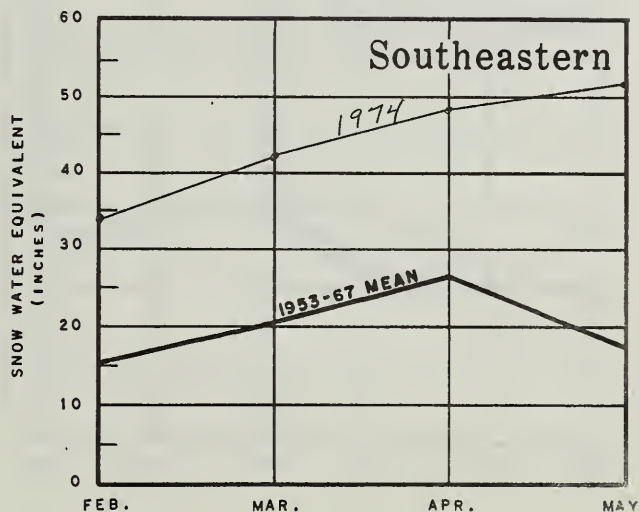
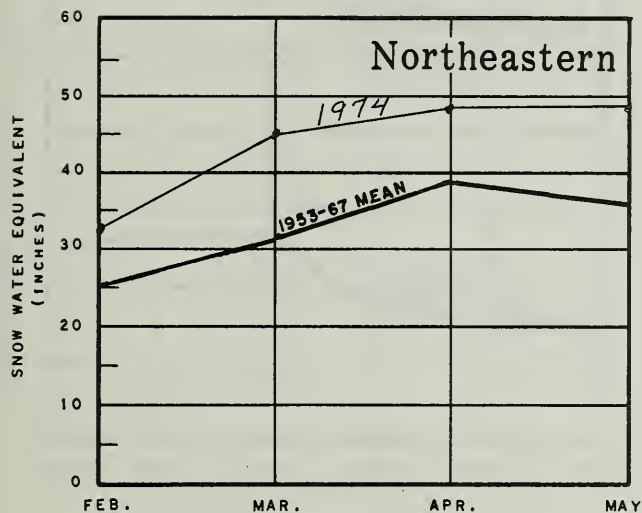




# WASHINGTON SNOW COVER

1974

## DRAINAGE AREAS





## EXPERIMENTAL DATA

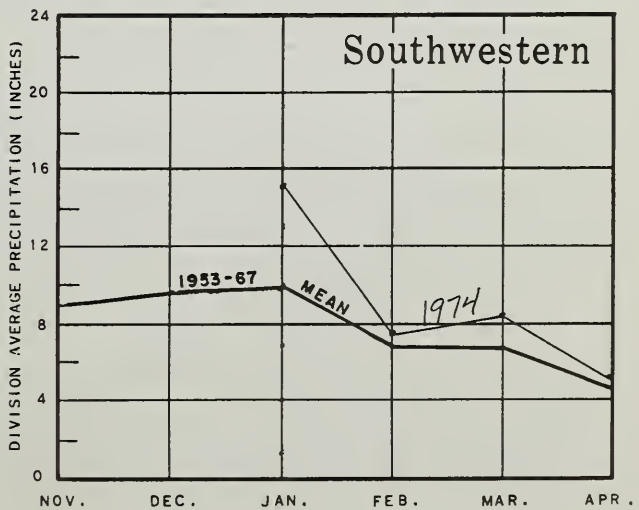
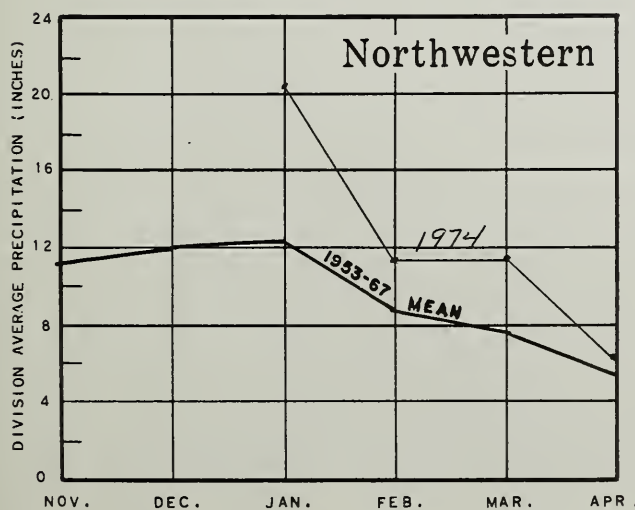
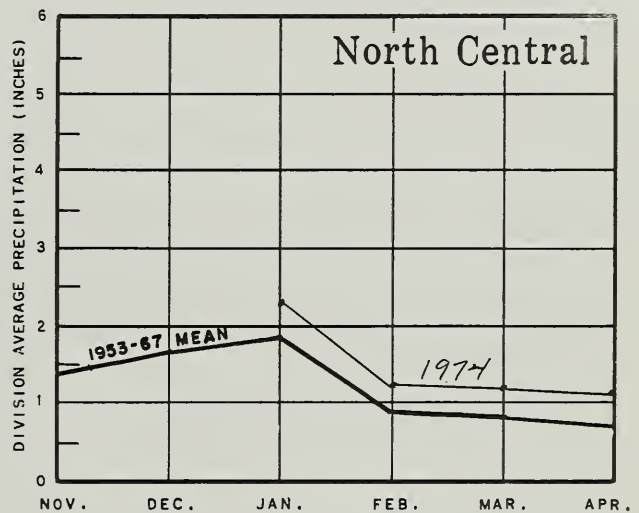
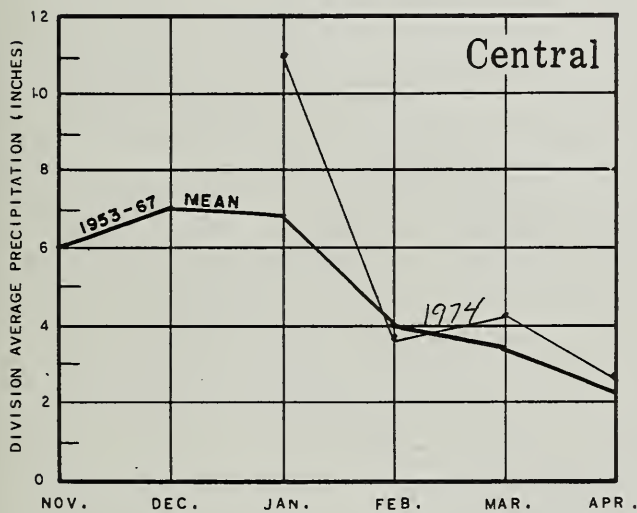
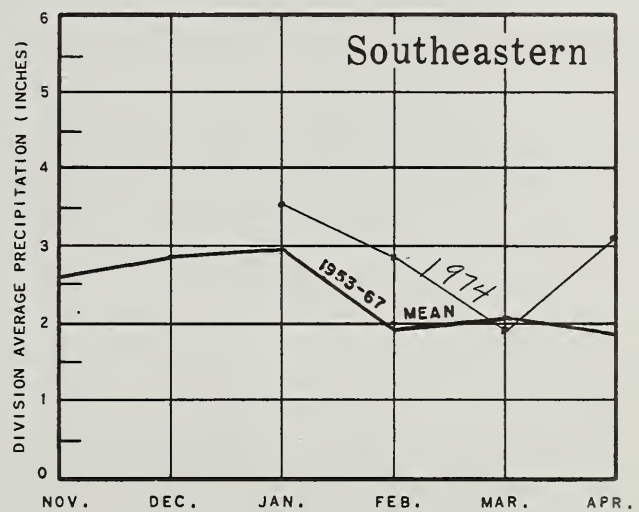
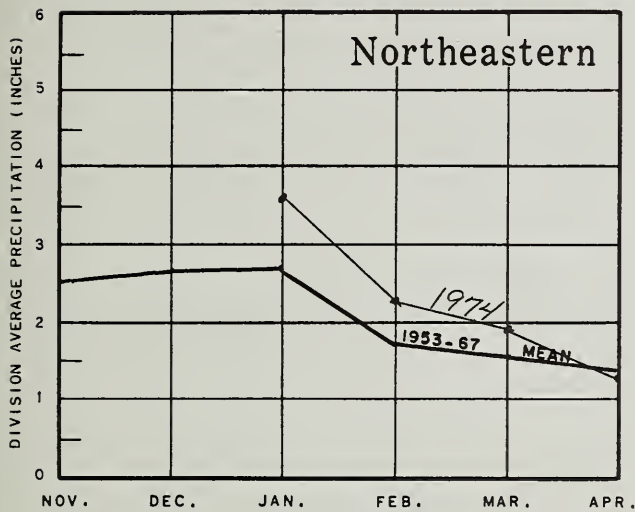




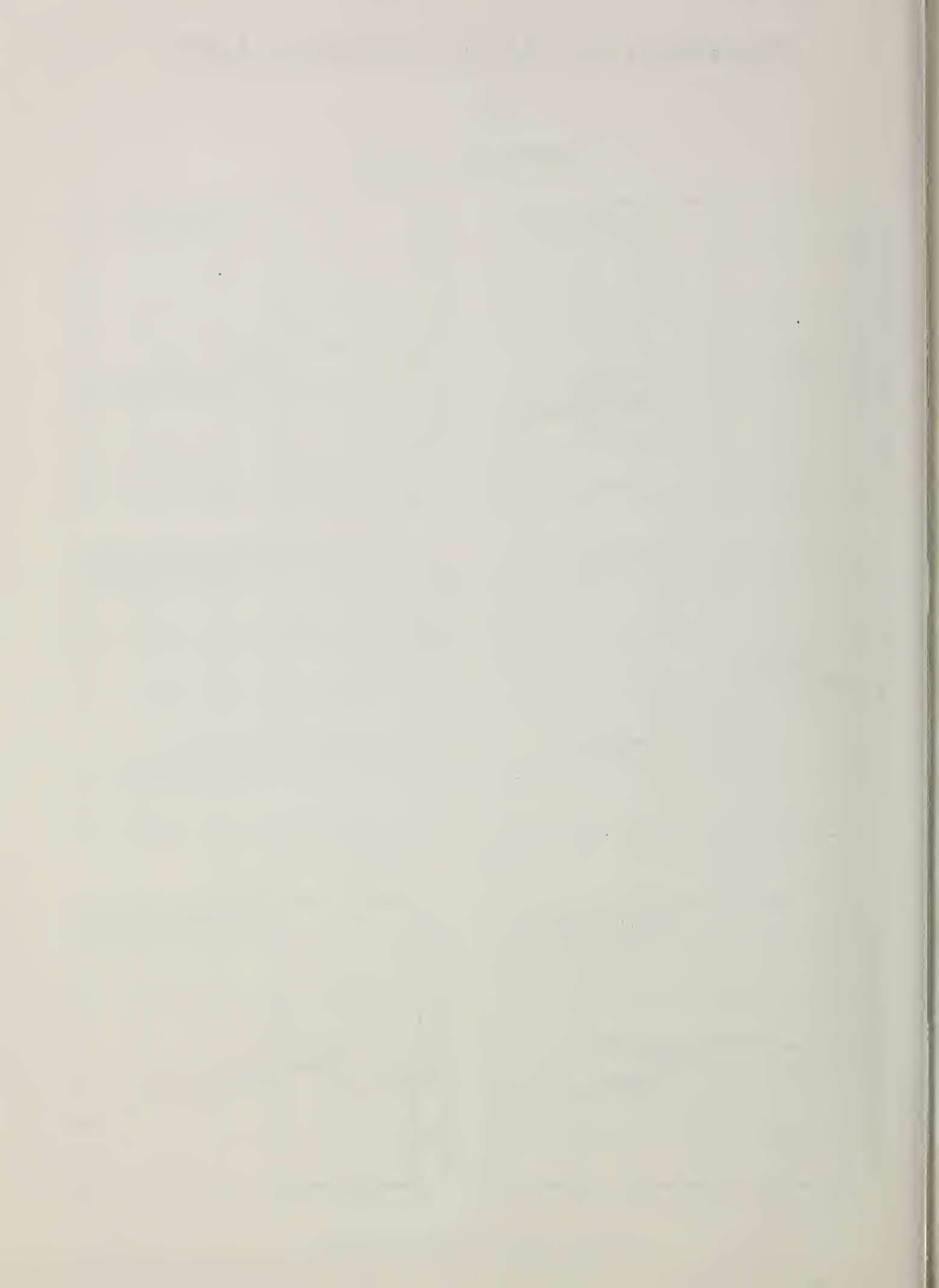
# WASHINGTON VALLEY PRECIPITATION

1974

## DRAINAGE AREAS







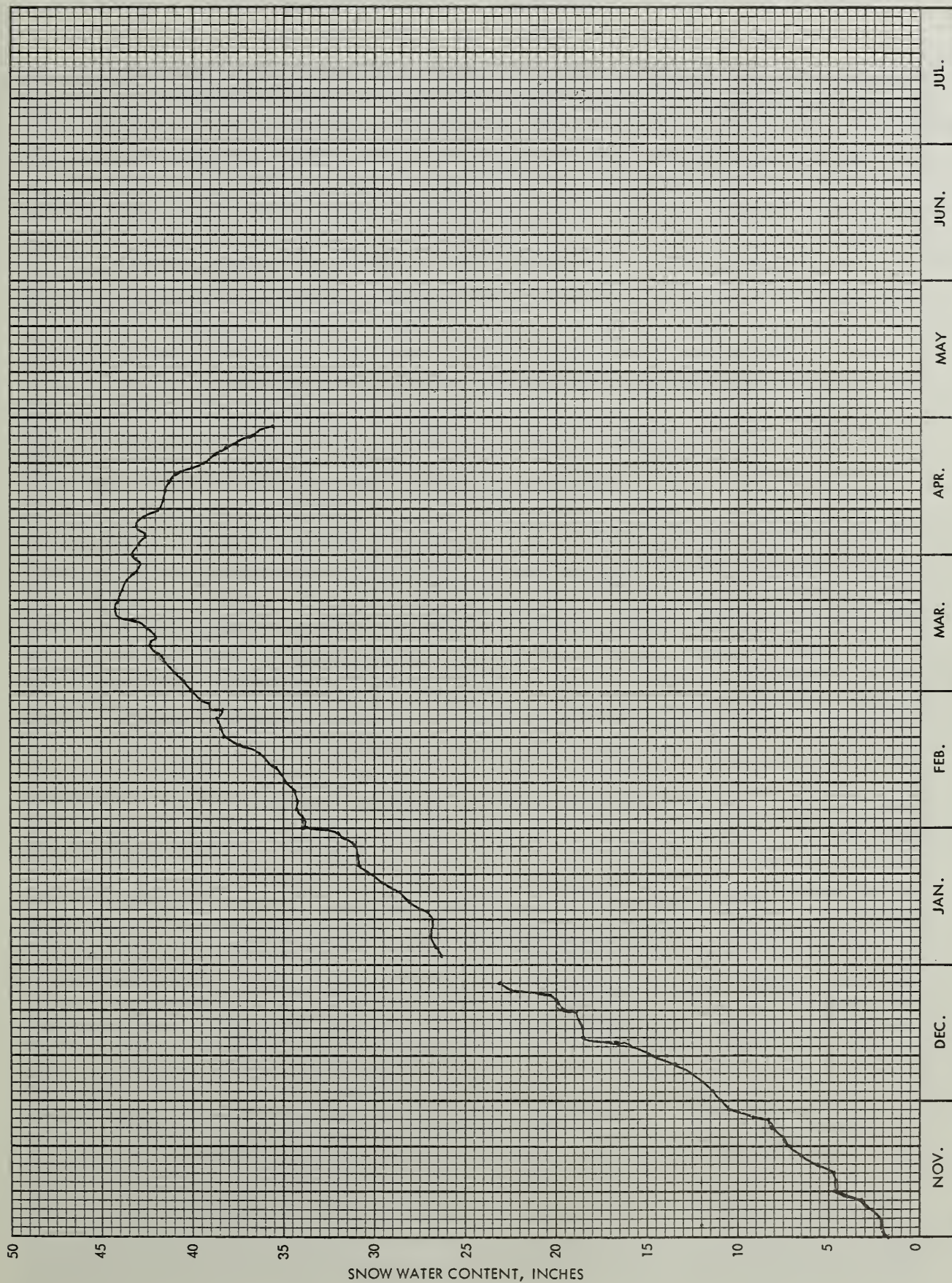


BERNE-ILL. CREEK  
SNOW PILLOW DATA

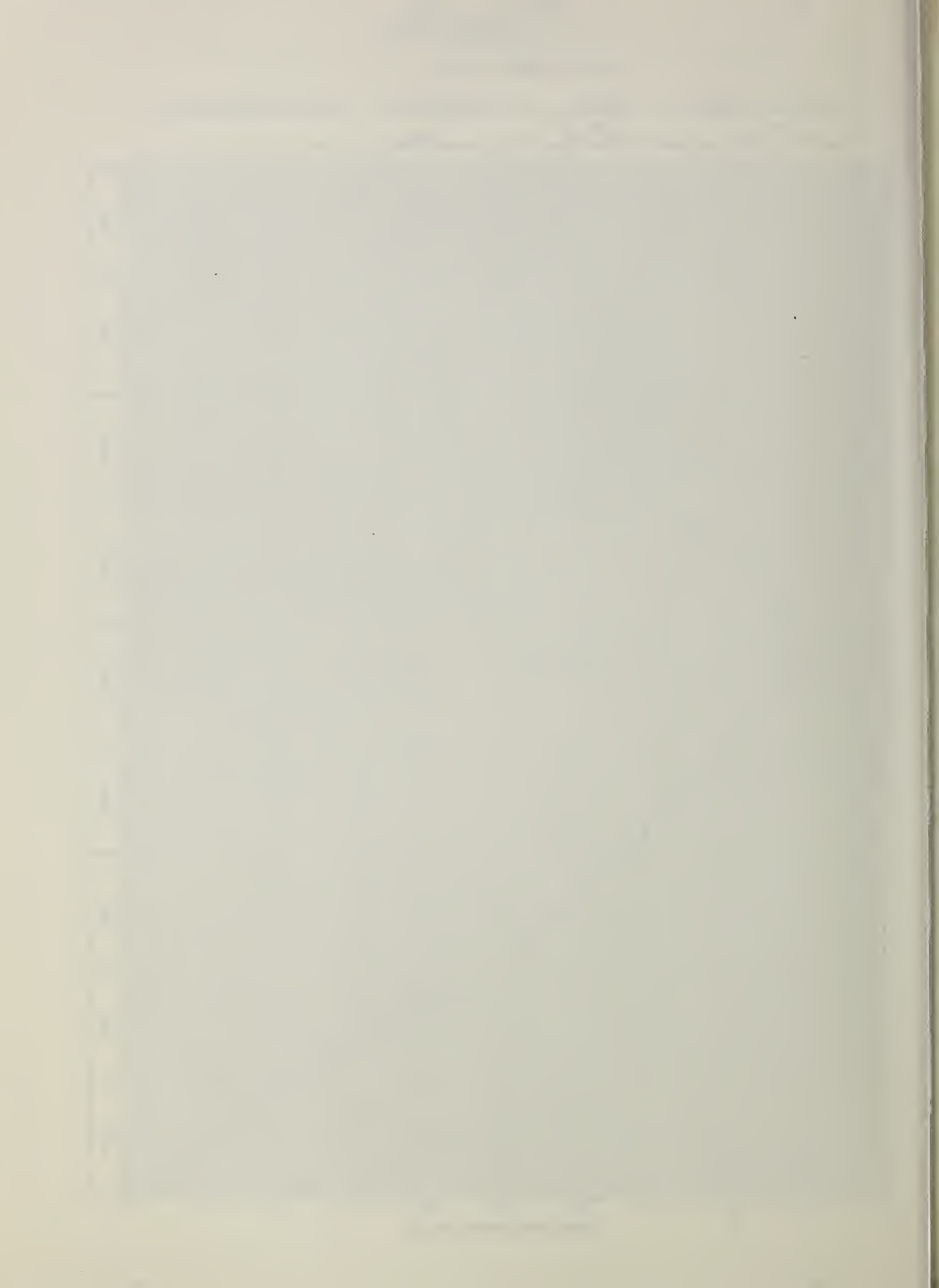
AS OF MAY 1, 1974

Sec. 13 T. 26N R. 14E No. 21B41SP Drainage: Wenatchee R.

Lat. 47° 45' Long. 121° 42' Elev. 3240









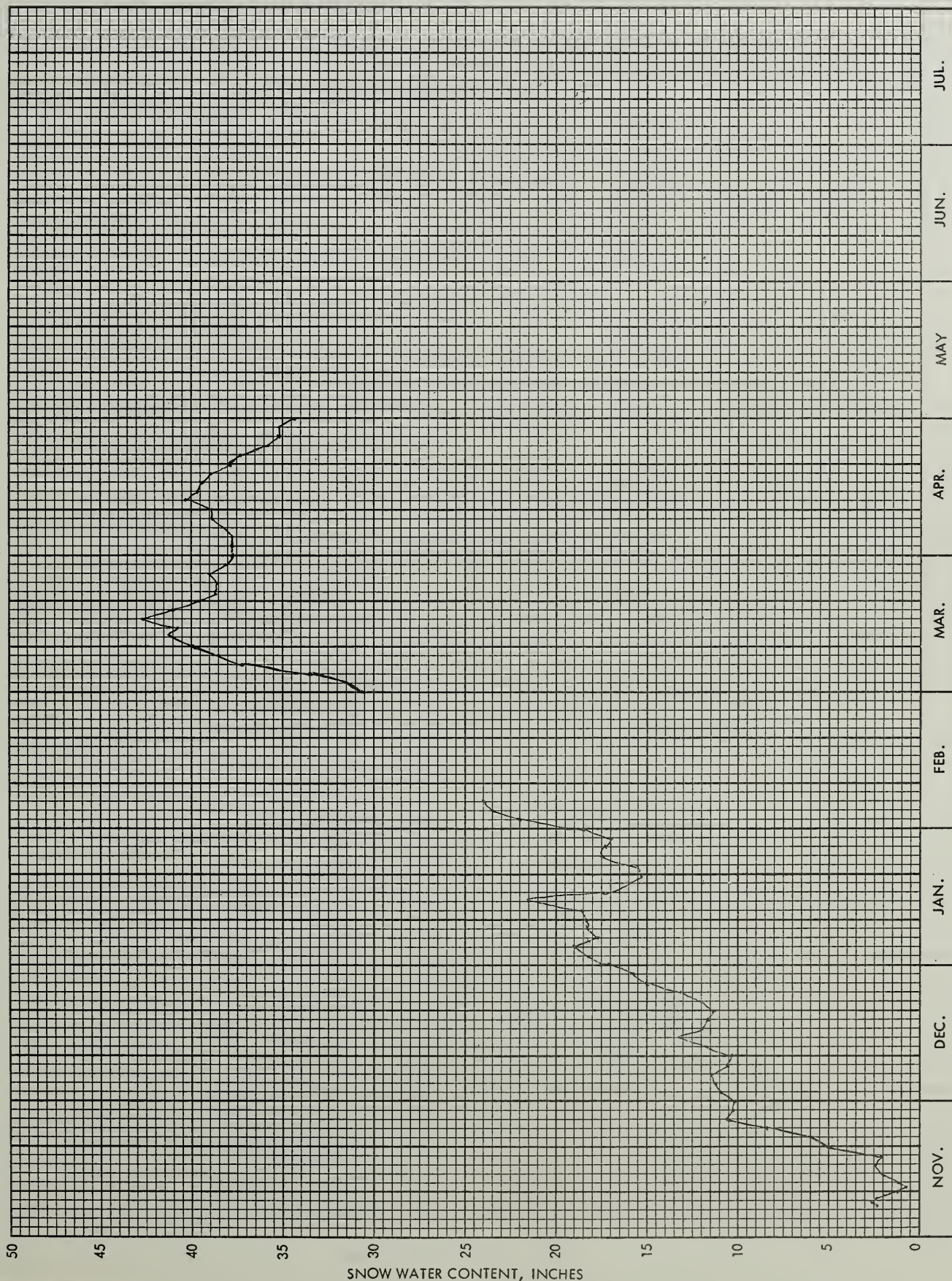
COUGAR MOUNTAIN - FS

# SNOW PILLOW DATA

AS OF MAY 1, 1974

Sec. 21 T. 21N R. 9E No. 21B42SP Drainage: Green River

Lat. 47° 17' Long. 120° 40' Elev. 3200'





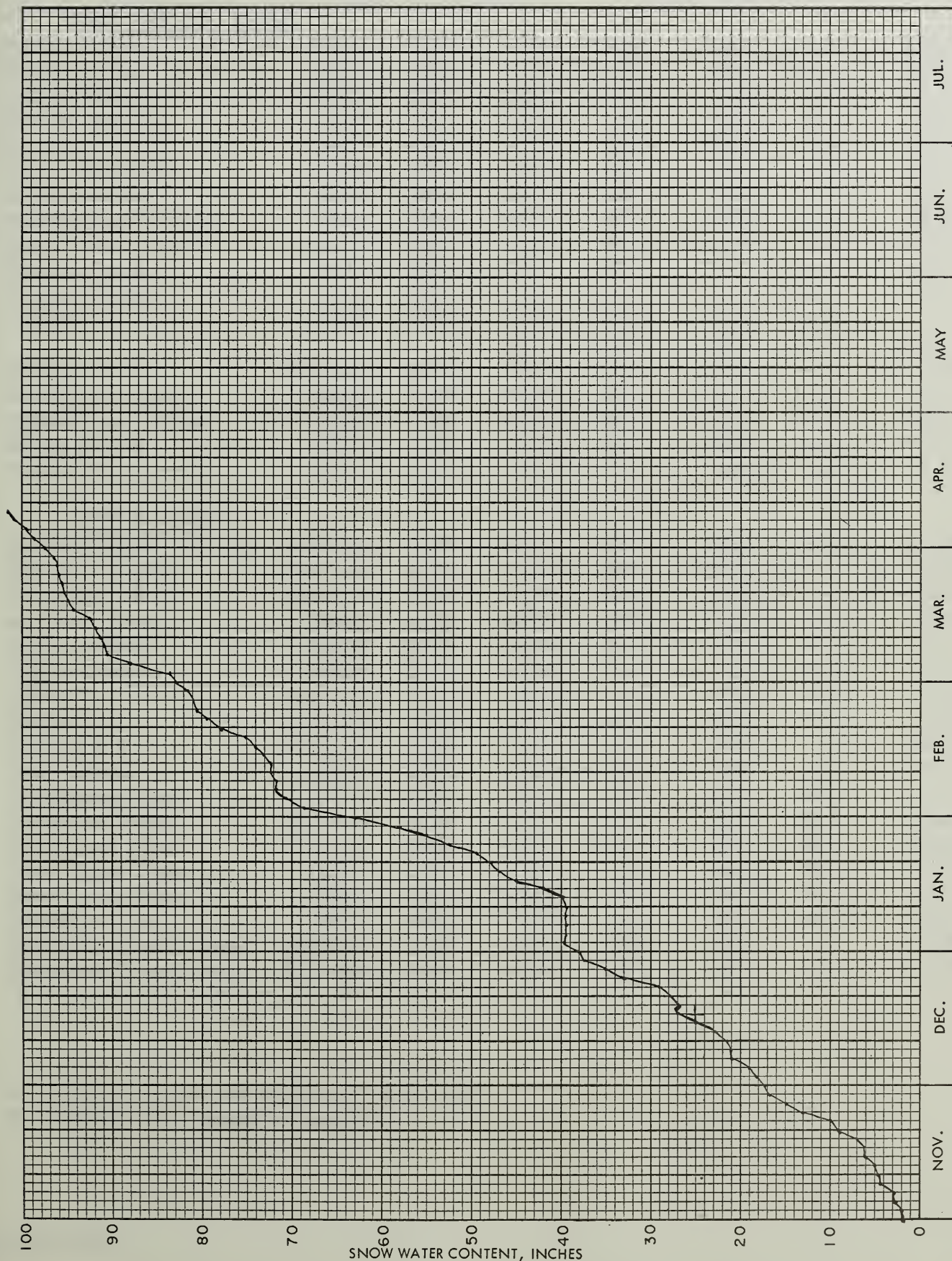




SNOWSHOE BUTTE - FS  
SNOW PILLOW DATA

AS OF MAY 1, 1974

Sec. 28 T. 21N R. 9E No. 21B43SP Drainage: Green River  
Lat. 47° 13' Long. 121° 22' Elev. 5000'









## SNOW DATA TO MAY 1, 1974 - APPENDIX 1

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #

U P P E R C O L U M B I A D R A I N A G EPEND OREILLE RIVER

Baree Creek	15B11	5500	4/30	148	74.3	26.6	49.6
Baree Midway	15B16	4600	4/30	105	50.9	18.0	35.1
Baree Trail	15B15	3800	5/1	4	1.6	0.0	1.2
Benton Meadow	16A02	2344	4/30	0	0.0	0.0	0.0
Benton Spring	16A03	4900	4/30	58	27.0	9.4	15.7
Boyer Mountain	17A02	5250	4/29	85	40.3	17.6	26.1
Brush Creek	14A04	5000	4/30	24	9.6	5.0	8.2
Bunchgrass Meadow	17A01	5000	4/30	94	48.0	24.8	30.4
Heart Lake Trail	14C10	4800	5/3	58	26.4	1.6	19.0
Hoodoo Basin	15C10	6000	5/3	153	75.2	34.8	55.2
Hoodoo Creek	15C01	5900	5/3	148	72.2	31.6	52.2
Lookout	15B02	5250	4/19	125	56.8	19.2	-
			5/1	110	48.0	16.8	37.7
Nelson	19-Can	3050	4/26	32	11.7	4.2	7.0*
Schweitzer Bowl	16A06	4500	4/30	87	42.2	12.8	26.6
Schweitzer Ridge	16A05	6100	4/30	152	70.5	36.7	50.6
Smith Creek	16A01	4800	4/25	154	75.6	33.4	47.9
Winchester Creek	17A03	2970	4/29	0	0.0	0.0	1.6

KETTLE RIVER

Barnes Creek	90-Can	5300	4/27	60	26.9	15.9	21.3*
Big White Mtn.	154-Can	5500	4/28	68	30.0	16.7	21.3*
Bluejoint Mtn.	244-Can	7500	4/27	104	46.7	-	New Course
Boulder Road	18A02	1450	4/29	0	0.0	0.0	0.0
Butte Creek	18A03	4070	4/29	24	10.1	4.9	5.9
Cabin Creek	18A08	3170	4/29	4	1.5	0.0	1.5
Carmi	126-Can	4100	4/28	7	2.3	0.0	1.9*
Farron # 1	17-Can	4000	4/26	40	16.1	7.9	8.2*
Farron # 2	243-Can	4000	4/26	39	16.0	7.1	New Course
Goat Creek	18A04	3595	4/29	0	0.0	0.0	0.0
Graystoke Lake	5-Can	5950	4/26	68	29.3	18.4	26.9*
Monashee Pass	48A-Can	4500	4/27	37	15.5	10.5	13.4*
Old Glory Mtn.	42-Can	7000	4/29	106	48.0	26.8	30.8*
Snow Caps Creek	18A05	2150	4/29	0	0.0	0.0	0.0
Snow Caps Trail	18A06	2720	4/29	0	0.0	0.0	0.0
Summit G. S.	18A07	4600	4/29	22	8.5	4.7	6.0
Trapping Creek Lower	166-Can	3050	4/28	0	0.0	-	0.0*
Trapping Creek Upper	165-Can	4450	4/28	24	9.8	3.6	6.1*

# Average based on 1958-1972 average

\* Average for years of record







## SNOW DATA TO MAY 1, 1974 - APPENDIX 2

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average $\frac{W}{D}$
<u>SPOKANE RIVER</u>							
Above Burke	15B08	4100	5/1	64	28.8	3.0	-
Copper Ridge	16B02	4800	4/30	83	37.5	0.0	27.3
Forty-nine Meadows	15B03	5000	4/30	85	34.5	10.0	30.3
Fourth of July Summit	16B03	3100	4/30	0	0.0	0.0	-
Granite Peak	15B13A	6000	4/30	151	60.4	30.9	48.3
Lookout	15B02	5250	4/19	125	56.8	19.2	-
			5/1	110	48.0	16.8	37.7
Lost Lake	15B14A	6000	4/30	245	104.0	35.6	62.0
Lower Sands Creek	16B01	3400	4/30	65	27.1	0.0	16.0
Medicine Ridge	15B04A	6150	4/30	149	59.8	31.2	51.5
Sherwin	16C01	3200	4/30	33	13.0	0.0	-
<u>OKANOGAN RIVER</u>							
Aberdeen Lake	6A-Can	4300	4/30	4	2.0	1.5	1.7*
Blackwall Mountain	100-Can	6250	4/30	112	52.8	27.4	38.8*
Bouleau Lake	234-Can	4580	4/28	47	19.2	11.4	15.3*
Brenda Mine	193-Can	4800	4/29	35	15.5	5.9	10.8*
Brookmere	27-Can	3200	4/30	16	5.6	2.1	5.9*
Carrs Landing Upper	168-Can	3200	4/29	0	0.0	-	0.0
Enderby	130-Can	6250	4/29	145	50.2	38.0	43.1*
Esperon Creek Lower	164-Can	4400	4/28	36	14.8	6.8	11.0*
Esperon Creek Middle	163-Can	4700	4/28	45	20.2	8.5	13.9*
Esperon Creek Upper	162-Can	5400	4/28	68	31.7	12.3	20.4*
Freezeout Meadows New	20A38	5000	4/29	157	79.2	20.9	-
Graystoke Lake	5-Can	5950	4/16	74	29.9	-	-
			4/26	68	29.3	18.4	26.9*
Hamilton Hill	107-Can	4900	4/27	42	15.6	7.9	13.4*
Harts Pass	20A05A	6500	4/29	160	72.9	32.4	50.3
Isintok Lake	152-Can	5510	4/27	36	13.0	5.0	7.3*
Lost Horse Mountain	105-Can	6300	4/29	48	17.0	8.2	10.7*
Loup Loup	19A07	4650	4/29	21	9.2	-	-
McCulloch	4-Can	4200	4/28	10	3.8	1.0	2.8*
Missezula Mountain	106-Can	5100	4/28	37	12.7	-	4.5*
Mission Creek	5A-Can	6000	4/16	84	32.2	-	-
			4/29	74	31.4	17.4	21.7*
Monashee Pass	48A-Can	4500	4/27	37	15.5	10.5	13.4*
Mount Kobau	156-Can	4950	4/30	55	23.5	7.7	13.7*
Mutton Creek No. 1	19A01	5700	4/26	59	28.3	0.0	10.9
Mutton Creek No. 2	19A04	6000	4/26	66	29.1	9.5	15.5
Mutton Creek No. 2SP	19A11SP	6000	4/26	-	25.4	6.7	-
New Copper Mountain	46A-Can	4300	4/29	0	0.0	0.0	3.7*
New Penticton Res. #2	183-Can	5225	4/30	33	12.5	5.8	-
Nickel Plate Mtn.	47-Can	6200	5/2	42	13.7	5.0	7.9*

# Average based on 1958-1972 average

\* Average for years of record







## SNOW DATA TO MAY 1, 1974 - APPENDIX 3

## SNOW

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average $\frac{1}{2}$
<u>OKANOGAN RIVER (Cont.)</u>							
Oyama Lake	203-Can	4400	5/1	Not Measured	2.2	4.2*	
Postill Lake	55-Can	4500	5/1	23	9.6	5.2	6.8*
Quartette Lake	34-Can	4000	4/29	38	13.8	6.6	-
Rusty Creek	19A03	4000	4/25	11	5.0	0.0	0.6
Salmon Meadows	19A02	4500	4/26	29	13.1	0.0	5.4
Silver Star Mountain	99-Can	6050	4/14	109	45.8	-	-
			4/28	100	44.7	25.6	27.4*
Summerland Reservoir	3A-Can	4200	4/27	26	10.0	3.8	6.7*
Trout Creek	3-Can	4700	4/28	24	8.6	2.9	5.2*
Vaseux Creek	233-Can	4600	5/2	9	2.8	0.0	2.9*
White Rocks Mountain	70-Can	6000	4/29	85	39.9	18.4	28.3*
<u>METHOW RIVER</u>							
Harts Pass	20A05A	6500	4/29	160	72.9	32.4	50.3
Loup Loup	19A07	4650	4/29	21	9.2	-	-
Mutton Creek No. 1	19A01	5700	4/26	59	28.3	0.0	10.9
Mutton Creek No. 2	19A04	6000	4/26	66	29.1	9.5	15.6
Mutton Creek No. 2SP	19A11SP	6000	4/26	-	25.4	6.7	-
Rusty Creek	19A03	4000	4/25	11	5.0	0.0	0.6
Salmon Meadows	19A02	4500	4/26	29	13.1	0.0	5.4
<u>CHELAN LAKE BASIN</u>							
Rainy Pass	20A09	4780	4/29	129	60.6	33.0	44.3
Safety Harbor	20A30A	6300	4/23	114	46.6	17.3	29.2
<u>ENTIAT RIVER</u>							
Blue Creek G. S.	20B28a	5425	4/29	118	60.7	23.0	New
Brief	20B19	1600	4/30	0	0.0	-	0.0
Entiat Meadows +	20A33a	4800	4/29	136	69.9	25.0	41.0
Entiat River Trail +	20A34a	3150	4/29	34	15.8	0.0	9.7
Four Mile Ridge +	20B27a	7000	4/29	108	55.5	20.0	-
Fox Camp +	20A36a	6510	4/29	182	93.5	40.0	63.5
Pope Ridge	20B20	4300	4/26	43	20.0	0.0	8.2
Pugh Ridge +	20A32a	6400	4/29	119	61.2	26.5	38.7
Shady Pass	20A37	6200	4/30	91	46.6	14.3	-
Snow Brushy +	20A35a	3850	4/29	97	49.9	14.5	30.8
Tommy Creek +	20B21a	5300	4/29	70	36.0	7.5	22.5

# Average based on 1958-1972 average

\* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation







## SNOW DATA TO MAY 1, 1974 - APPENDIX 4

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average $\frac{1}{2}$
<u>WENATCHEE RIVER</u>							
Berne-Mill Creek	21B23	3170	4/29	79	39.8	3.8	21.1
Berne-Mill Creek New SP	21B41SP	3240	4/29	65	31.6	0.0	17.7
Blewett Pass No. 2	20B02	4270	4/12	54	23.8	4.2	13.0
			4/29	36	17.5	0.0	9.5
Chiwaukum G. S.	20B16	1810	4/29	0	0.0	0.0	1.8
Fish Lake	21B04	3371	4/25	101	47.9	3.8	26.7
Lake Wenatchee	20B05	1970	4/29	6	3.1	0.0	1.6
Merritt	20B18	2140	4/29	18	8.3	0.0	3.8
Stevens Pass	21B01	4070	4/15	175	83.2	32.9	55.2
			4/29	165	82.6	31.4	55.8
Stevens Pass Sand Shed	21B45	3700	4/15	133	63.4	16.7	-
			4/29	119	59.6	12.2	-
<u>SQUILCHUCK CREEK</u>							
Beehive Springs	20B03	4400	4/30	9	3.9	0.0	1.7
Scout-A-Vista	20B04	3400	4/30	0	0.0	0.0	0.4
<u>STEMILT CREEK</u>							
Jump-Off	20B08	4450	4/29	10	4.6	0.0	2.8
Stemilt Slide	20B06	5000	4/29	32	14.9	0.0	7.1
Upper Wheeler	20B07	4400	4/29	0	0.0	0.0	1.0
<u>COLOCKUM CREEK</u>							
Colockum Creek Upper	20B22	5300	4/30	31	15.3	0.0	-
Colockum Creek Lower	20B23	4300	4/30	7	3.0	0.0	-
<u>YAKIMA RIVER</u>							
Ahtanum R. S.	21C11	3100	5/1	0	0.0	-	0.0
Big Boulder Creek	21B09	3200	4/25	59	28.1	0.0	7.4
Blewett Pass No. 2	20B02	4270	4/12	54	23.8	4.2	13.0
			4/29	36	17.5	0.0	9.5
Bumping Lake	21C08	3450	4/15	64	28.2	3.4	13.4
			4/30	46	19.9	0.0	9.4
Bumping Lake New	21C36	3400	4/15	77	34.2	7.6	-
			4/30	59	26.6	0.0	15.0
Cayuse Pass	21C06	5300	4/12	295	129.2	54.5	90.2
			4/29	272	138.1	53.9	-
Fish Lake	21B04	3371	4/25	101	47.9	3.8	26.7
Joe Lake +	21B46a	4624	4/29	219++	2/	33.8	-
Lake Cle Elum	21B14M	2200	4/15	0	0.0	-	-
			4/29	0	0.0	-	0.0

# Average based on 1958-1972 average

++ Snow deeper than full length of aerial marker

2/ Marker Buried

+ Snow water equivalent estimated from aerial stadia observation







## SNOW DATA TO MAY 1, 1974 - APPENDIX 5

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average <sup>#</sup>

**YAKIMA RIVER (Cont.)**

Lemah Creek +	21B47a	3327	4/26	129	65.0	16.2	-
Olallie Meadows	21B02	3625	4/27	179	91.3	19.2	48.4
			4/29	173	91.6	18.2	48.6
Satus Pass	20D01	4030	4/30	16	7.8	0.0	1.9
Stampede Pass	21B10	3860	4/15	156	65.7	23.4	43.4
			4/29	138	62.1	22.2	43.4
Tunnel Avenue	21B08	2450	4/15	77	34.3	4.3	20.1
			4/29	60	27.0	0.0	16.0
Van Epps Pass +	20B26a	5925	4/26	164	75.0	33.3	-
Waptus Lake +	21B49a	3024	4/26	105	50.0	13.5	-
White Pass (E. Side)	21C28	4500	4/16	102	45.4	10.2	26.0
			4/29	95	45.3	-	25.9
White Pass (L. Lake)	21C27	4500	4/29	103	49.5	8.6	28.6

**AHTANUM CREEK**

Ahtanum R. S.	21C11	3100	5/1	0	0.0	-	0.0
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**LOWER COLUMBIA****ASOTIN CREEK**

Spruce Springs	17C04	5700	4/29	88	43.7	9.4	25.8
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**MILL CREEK**

Tollgate	18D3M	5070	4/26	104	52.9	7.0	18.9
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**KLICKITAT RIVER**

Satus Pass	20D01	4030	4/30	16	7.8	0.0	1.9
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**WHITE SALMON RIVER**

Cultus Creek	21C12	4000	4/28	164	79.7	21.9	48.9
Surprise Lakes	21C13A	4250	4/28	185	92.5	18.5	52.9

**WIND RIVER**

Old Man Pass	21D19	3100	4/28	58	27.0	0.0	12.6
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**LEWIS RIVER**

Blue Lake +	21C22a	4800	4/29	292	146.0	53.5	92.4
Bob's Trail	21C21	2200	4/29	38	18.0	0.0	7.8
Calamity Ridge +	22D01a	2500	4/28	0	0.0	0.0	1.3
Council Pass +	21C18a	4200	4/29	136	68.0	16.9	38.8
Cultus Creek	21C12	4000	4/28	164	79.7	21.9	48.9
Divide Meadow +	21C29a	5600	4/29	192	96.0	34.3	65.5
Grand Meadow	21C25	3500	4/28	86	40.2	1.1	22.4

# Average based on 1958-1972 average

+ Snow water equivalent estimated from aerial stadia observation



$\frac{d}{dt} \left( \frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$



## SNOW DATA TO MAY 1, 1974 - APPENDIX 6

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average <sup>#</sup>

LEWIS RIVER (Cont.)

Lone Pine Shelter	21C26	3800	4/12	184	83.2	21.4	43.3
			4/29	160	81.0	20.3	46.3
Marble Mountain +	22C05a	3200	4/28	132	72.6	4.3	33.2
Mosquito Meadows	21C19	4100	4/10	167	74.1	22.6	44.9
			4/29	147	72.9	21.7	45.8
New Muddy River	22C06	2000	4/29	0	0.0	0.0	0.8
Old Man Pass	21D19	3100	4/28	58	27.0	0.0	12.6
Plains of Abraham +	21C1a	4400	4/28	236	120.4	45.6	76.9
Smith Creek Road	22C04	2100	4/28	14	6.1	0.0	5.3
Spencer Meadow +	21C20a	3400	4/29	90	43.2	0.0	16.1
Surprise Lakes	21C13A	4250	4/28	185	92.5	18.5	52.9
Table Mountain +	21C24a	4200	4/29	164	82.0	22.1	40.3
Timbered Peak +	21D18a	3000	4/28	52	25.0	0.0	9.9

COWLITZ RIVER

Cayuse Pass	21C06	5300	4/12	295	129.2	54.5	90.2
			4/29	272	138.1	53.9	-
Mosquito Meadows	21C19	4100	4/10	167	74.1	22.6	44.9
			4/29	147	72.9	21.7	45.8
Ohanapecosh	21C32	2200	4/8	47	20.5	0.0	15.7
Packwood Lake	21C31	2870	4/8	55	23.3	0.0	13.1
Plains of Abraham +	22C01a	4400	4/28	236	120.4	45.6	76.9
Potato Hill	21C14	4500	4/10	128	54.9	17.9	33.3
			4/29	111	53.7	12.8	-
White Pass (E. Side)	21C28	4500	4/15	102	45.4	10.2	26.0
			4/29	95	45.3	-	25.9
White Pass (L. Lake)	21C27	4500	4/29	103	49.5	8.6	28.6
Willame Creek	21C30	3250	4/8	120	55.6	13.8	31.4

PUGET SOUND DRAINAGENISQUALLY RIVER

Ghost Forest	21C04	4550	4/29	162	80.7	22.2	-
Longmire	21C03	2760	4/29	21	10.8	0.0	-
New Paradise Park	21C35	5500	4/29	241	127.8	47.8	-
Stem Glade	21C01	5050	4/29	224	110.0	43.0	-

GREEN RIVER

Cougar Mountain SP	21B42SP	3200	4/29	52	26.2	0.0	-
Snowshoe Butte SP	21B43SP	5000	4/8	194	89.2	-	-
			4/29	195	100.0	42.6	-
Stampede Pass	21B10	3860	4/15	156	65.7	23.4	43.4
			4/29	138	62.1	22.2	43.4

# Average based on 1958-1972 average

+ Snow water equivalent estimated from aerial stadia observation







## SNOW DATA TO MAY 1, 1974 - APPENDIX 7

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average <sup>#</sup>
<u>SKYKOMISH RIVER</u>							
Stevens Pass	21B01	4070	4/15	175	83.2	32.9	55.2
			4/29	165	82.6	31.4	55.8
Stevens Pass S. Shed	21B45	3700	4/15	133	63.4	16.7	-
			4/29	119	59.6	12.2	-
<u>SKAGIT RIVER</u>							
Beaver Creek Trail	21A04	2200	**4/12	41	18.2	3.6	12.6
			5/1	17	7.3	0.0	4.8
Beaver Pass	21A01	3680	**4/12	118	55.1	19.0	33.7
			4/29	103	50.3	16.4	34.0
Brown Top	21A28a	6000	**4/10	223	90.2	50.0	-
			5/1	213	98.0	47.8	-
Devils Park	20A04	5900	**4/10	149	67.2	34.0	45.6
			4/29	147	67.6	34.9	49.5
Freezeout Cr. Trail	20A01	3500	**4/10	49	19.2	9.2	12.5
			4/29	36	15.8	4.2	8.2
Freezeout Meadows New	20A38	5000	**4/10	168	82.5	23.7	29.9
			4/29	157	79.2	20.9	31.0
Granite Creek	21A29	3500	**4/12	60	24.6	11.4	-
			4/27	48	20.8	4.6	-
Harts Pass	20A05A	6500	**4/10	155	70.1	33.3	46.4
			4/29	160	72.9	32.4	-
Klesilkwa	35B-Can	3700	4/30	37	16.9	1.4	11.3*
Meadow Cabins	20A08	1900	**4/11	6	2.8	1.0	6.0
			4/29	0	0.0	0.0	1.3
New Hozomeen Lake	21A30	2800	**4/10	46	17.8	6.6	-
			4/29	27	11.5	0.0	-
New Tashme	26A-Can	2500	4/30	2	1.1	0.0	5.6*
Quartette Lake	34-Can	4000	4/29	38	13.8	6.6	-
Rainy Pass	20A09	4780	**4/12	142	63.2	30.8	41.6
			4/29	129	60.6	33.0	44.3
Thunder Basin	20A07	4200	**4/11	84	35.8	15.5	23.9
			4/29	78	33.9	14.3	25.5
<u>BAKER RIVER</u>							
Baker Pass +	21A27a	4900	4/13	290	133.0	-	-
Dock Butte	21A11A	3800	**4/12	241	110.6	56.2	71.3
			4/13	230	106.0	59.0	64.0
			5/3	218	106.8	54.0	77.4
Easy Pass	21A07A	5200	4/13	254	117.0	58.0	86.7
			5/2	267	126.3	66.5	93.3
Jasper Pass	21A06A	5400	4/13	290	133.0	78.0	91.1
			5/2	287	134.2	71.8	101.2

# Average based on 1958-1972 average

\* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

\*\* April 1 - Late Measurement







## SNOW DATA TO MAY 1, 1974 - APPENDIX 8

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average <sup>#</sup>

BAKER RIVER (Cont.)

Komo Kulshan	21A17	800	5/3	0	0.0	0.0	0.7
Marten Lake	21A09A	3600	**4/11	258	125.0	59.8	78.1
			4/13	268	129.0	63.0	80.4
			5/2	241	122.3	60.3	83.8
Mount Blum +	21A18a	5800	4/13	206	95.0	68.0	-
Panorama New	21A26	4300	**4/11	238	114.7	58.7	-
			4/28	223	146.1	57.5	-
Rocky Creek	21A12A	2100	**4/10	108	51.9	16.9	29.2
			4/13	96	48.0	18.0	25.5
			5/2	83	37.4	8.7	22.6
Schreibers Meadow	21A10A	3400	**4/10	209	104.2	47.2	65.6
			4/13	194	97.0	42.0	63.0
			5/2	196	100.4	45.4	67.5
S. F. Thunder Creek	21A14A	2200	**4/10	17	7.6	0.0	5.3
			4/13	22	10.0	1.0	1.7
			5/3	0	0.0	0.0	1.1
Sulphur Creek	21A13	1600	**4/10	41	18.0	2.2	13.6
			5/2	16	7.0	0.0	6.4
Three Mile Creek	21A15	4500	**4/10	0	0.0	0.0	1.7
			5/3	0	0.0	0.0	0.0
Watson Lakes	21A08A	4500	**4/12	244	107.5	47.8	71.2
			4/13	216	95.0	59.0	72.9
			5/2	210	98.8	49.6	76.9

NOOKSACK RIVER

Panorama New	21A26	4300	**4/11	238	114.7	58.7	-
			4/28	223	146.1	57.5	-

O L Y M P I C P E N I N S U L AMORSE CREEK

Cox Valley	23B14	4500	4/29	125	55.4	27.9	-
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ELWHA RIVER

Hurricane	23B03	4500	5/4	77	32.0	13.8	26.9
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SKOKOMISH RIVER

Black & White	23B07	4200	4/29	146	68.2	31.2	-
Black & White Lakes	23B06	4700	4/29	188	101.6	53.2	-
Home Sweet Home	23B05	5200	4/29	245	126.2	64.3	-

# Average based on 1958-1972 average

+ Snow water equivalent estimated from aerial stadia observation

\*\* April 1 - Late measurement







# Agencies Assisting with Snow Surveys

## GOVERNMENT AGENCIES

### Canada:

Department of Lands, Forests and Water Resources,  
Water Resources Service, British Columbia

### States:

Washington State Department of Ecology  
Washington State Department of Natural Resources

### Federal:

Department of the Army  
Corps of Engineers  
U. S. Department of Agriculture  
Forest Service  
U. S. Department of Commerce  
NOAA, National Weather Service  
U. S. Department of the Interior  
Bonneville Power Administration  
Bureau of Reclamation  
Geological Survey  
National Park Service

## PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.  
Pacific Power and Light Company  
Puget Sound Power and Light Company  
Washington Water Power Company

## OTHER PUBLIC AGENCIES

Okanogan Irrigation District  
Wenatchee Heights Irrigation District

## MUNICIPALITIES

City of Tacoma  
City of Seattle

*Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.*



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